

WHAT IS CLAIMED IS:

1. A display device comprising:

a transparent substrate;

a plurality of electroluminescent elements

5 arranged on said transparent substrate, each of said electroluminescent elements being formed by sequentially laying a transparent electrode, an electroluminescent layer and a reflector electrode on said transparent substrate;

10 transparent members having a profile of a frustum of pyramid or cone and respectively covering said electroluminescent elements; and

reflection films formed respectively on the surfaces of said transparent members.

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2. A display device according to claim 1, further comprising:

a plurality of drive elements arranged to drive the respective corresponding electroluminescent

20 elements to emit light;

said drive element being coated respectively with said transparent members.

25 3. A display device according to claim 2, further comprising:

an insulating body filling the gaps separating said transparent members and wires formed on said

insulating body;

said drive elements being connected respectively to said wires.

5 4. A display device according to claim 1, further comprising:

an insulating body filling the gaps separating said transparent members and wires formed on said insulating body;

10 said reflector electrodes and said transparent electrodes of said electroluminescent elements being connected respectively to said wires.

15 5. A display device according to claim 1, wherein each of said electroluminescent elements comprises a half mirror arranged between said transparent substrate and said transparent electrode;

20 the light path length between said half mirror and said reflector electrode being integer times of $1/2$ of the wavelength of light emitted from said electroluminescent element.

25 6. A display device according to claim 5, wherein the light path length between said half mirror and said reflector electrode is equal to the wavelength of light emitted from said electroluminescent element.

7. A display device according to claim 1, wherein
each of said electroluminescent elements further
comprises a light absorbing layer arranged between said
reflector electrode and said electroluminescent layer
5 and having a refractive index lower than that of said
electroluminescent layer.

8. A display device according to claim 7, wherein
the electroluminescent layer of each of said
10 electroluminescent elements includes an electron
transport layer arranged at the side of said reflector
electrode and the refractive index of said light
absorbing layer is lower than that of said electron
transparent layer.

9. A display device according to claim 1, wherein
each of said electroluminescent elements further
comprises a silica aerogel film layer arranged between
said transparent substrate and said transparent
20 electrode.

10. A display device according to claim 1,
wherein
each of said electroluminescent elements has an
25 air gap formed between said transparent substrate and
said transparent electrode.

11. A display device comprising:

a transparent substrate;

a plurality of electroluminescent elements
arranged on said transparent substrate, each of said
5 electroluminescent elements being formed by
sequentially laying a transparent electrode, an
electroluminescent layer and a reflector electrode on
said transparent substrate;

transparent members respectively covering said
10 electroluminescent elements, each of said transparent
members partly having a curved surface showing a
positive curvature, a part thereof held in contact with
said transparent substrate having a curved surface
showing a negative curvature; and

15 reflection films formed respectively on the
surfaces of said transparent members.

12. A display device according to claim 11,
wherein

20 each of said reflection film operates as a concave
mirror relative to the corresponding electroluminescent
element and the focal plane of the concave mirror is
located within said electroluminescent element.

25 13. A display device according to claim 11,
further comprising:

a plurality of drive elements arranged to drive

the respective corresponding electroluminescent elements to emit light;

said drive element being coated respectively with said transparent members.

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14. A display device according to claim 13, further comprising:

an insulating body filling the gaps separating said transparent members and wires formed on said insulating body;

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said drive elements being connected respectively to said wires.

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15. A display device according to claim 11, further comprising:

an insulating body filling the gaps separating said transparent members and wires formed on said insulating body;

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said reflector electrodes and said transparent electrodes of said electroluminescent elements being connected respectively to said wires.

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16. A display device according to claim 11, wherein

each of said electroluminescent elements comprises a half mirror arranged between said transparent substrate and said transparent electrode;

the light path length between said half mirror and said reflector electrode being integer times of $1/2$ of the wavelength of light emitted from said electroluminescent element.

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17. A display device according to claim 16, wherein

the light path length between said half mirror and said reflector electrode is equal to the wavelength of light emitted from said electroluminescent element.

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18. A display device according to claim 11, wherein

each of said electroluminescent elements further comprises a light absorbing layer arranged between said reflector electrode and said electroluminescent layer and having a refractive index lower than that of said electroluminescent layer.

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19. A display device according to claim 18, wherein

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the electroluminescent layer of each of said electroluminescent elements includes an electron transport layer arranged at the side of said reflector electrode and the refractive index of said light absorbing layer is lower than that of said electron transparent layer.

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20. A display device according to claim 11,
wherein

each of said electroluminescent elements further comprises a silica aerogel film layer arranged between said transparent substrate and said transparent electrode.

21. A display device according to claim 11,
wherein

10 each of said electroluminescent elements has an
air gap formed between said transparent substrate and
said transparent electrode.